

REMARKS:

Claims 1-5, 7-48 are currently pending in the application. Claims 12, 26, and 41 have been designated as reciting allowable subject matter. Claims 1-4 and 7-18 stand rejected under 35 U.S.C. § 112, second paragraph. Claims 1-5 and 7-48 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Claims 1-5, 7-11, 13-25, 27-40, and 42-48 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,266, 649 to Linden et al. ("Linden") in view of U.S. Patent No. 6,018,738 to Breese et al. ("Breese").

REJECTION UNDER 35 U.S.C. § 112:

Claims 1-4 and 7-18 stand rejected under 35 U.S.C. § 112, second paragraph. Specifically, the Office Action indicates that the claim is indefinite based on a recitation of the phrase "the user interface." Although Applicants believe independent claim 1 is definite without amendment, to expedite issuance of a patent from this Application, Applicants have amended claim 1 to replace the recitation of "the user interface" with a recitation of "a second user interface." For at least this reason, Applicants respectfully submit that claim 1, and the claims depending from claim 1, is in full compliance with the requirements of 35 U.S.C. § 112. Accordingly, it is respectfully requested that the Examiner reconsider and withdraw the rejection of independent claim 1 and its dependent claims under 35 U.S.C. § 112.

REJECTION UNDER 35 U.S.C. § 101:

Claims 1-5 and 7-48 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter.

Although the Examiner acknowledges that claims 1-5 and 7-48 produce a useful, concrete, and tangible result, the Examiner contends that these claims "do not affect, effect, or are affected by technology, and thus do not recite statutory subject matter."

Regarding independent claims 1, 5, and 48, and their dependent claims, Applicants respectfully disagree with the Examiner's contention that the claims do not recite statutory subject matter. However, in an effort to expedite issuance of a patent from this Application, Applicants have amended independent claims 1 and 48 to clarify that the system and its elements are "computer-implemented." Applicants have also amended independent claim 5 to clarify that the method is computer-implemented and that its steps are performed "using one or more processing units." Thus, it is respectfully submitted that independent claims 1, 5, and 48 and their respective dependent claims recite statutory subject matter in compliance with the requirements of 35 U.S.C. § 101.

Regarding independent claim 33 and its dependent claims, Applicants respectfully disagree with the Examiner's contention that the claims do not recite statutory subject matter. According to the MPEP:

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory.

(MPEP § 2106(IV)(B)(1)(a)) Thus, claim 33, which is directed to "software embodied in computer-readable media and when executed is operable to" perform certain recited functions, is statutory. Thus, it is respectfully submitted that independent claim 33 and its dependent claims recite statutory subject matter in compliance with the requirements of 35 U.S.C. § 101.

For at least these reasons, Applicant submits that claims 1-5 and 7-48 are directed to statutory subject matter. The Applicant further submits that claims 1-5 and 7-48 are in condition for allowance. Therefore, the Applicant respectfully requests that the rejection of claims 1-5 and 7-48 under 35 U.S.C. § 101 be reconsidered and that claims 1-5 and 7-48 be allowed.

REJECTION UNDER 35 U.S.C. § 103(a):

Claims 1-5, 7-11, 13-25, 27-40, and 42-48 stand rejected under 35 U.S.C. § 103(a) over Linden in view of Breese. However, the proposed combination of Linden and Breese fails to disclose or suggest all of the limitations of these claims as amended herein, so claims 1-5, 7-11, 13-25, 27-40, and 42-48 as amended cannot be rendered obvious by the proposed combination of Linden and Breese.

Independent claim 1 is discussed as an example of the limitations which the proposed Linden - Breese combination fails to disclose, teach, or suggest. Independent claims 5, 33, and 48 recite certain substantially similar limitations.

First, the user selecting “a specific category such as ‘nonfiction’ or ‘romance’ from a drop-down menu to request category specific recommendations,” as disclosed in Linden, cannot properly be construed as ***“the user request specifying a desired attribute value for each of a plurality of selected product attributes,”*** as recited in independent claim 1, as amended. Even if the “category” disclosed in Linden could properly be construed as a product attribute, and even if a user selection of non-fiction or romance, as disclosed in Linden, could be construed as a user request specifying a desired attribute value, Linden still would not disclose, teach, or suggest ***a plurality of selected product attributes***, as recited in independent claim 1, as amended. Rather, the user selection disclosed in Linden would still at best disclose a single user-specified attribute, which is specified via a single drop-down menu. Thus, Linden fails to disclose, teach, or suggest “a user request for a product having a plurality of product attributes, ***the user request specifying a desired attribute value for each of a plurality of selected product attributes***,” as recited in independent claim 1, as amended.

These inadequacies of Linden are not remedied by the proposed combination with Breese. Rather, Breese teaches away from a user request, as recited in independent claim 1, by indicating that requiring an active user query is a “drawback to be eliminated.” (Column 1, line 59 — Column 2, line 3; Column 3, lines 40-46). Furthermore, the portions of Breese on which the Examiner relies in support of “a user request for a product having one or more product attributes,” do not disclose “a user request for a product,” nor a “user

request specifying a desired attribute value.” Breese merely discloses that “the entity/attribute data record generator/retriever may accept entity/attribute information from the improved collaborative filter engine or alternatively directly from the user interface.” (Column 10, lines 10-13). The use of a user interface in this passage is for the creation of an entity/attribute data record. The entity/attribute data record is stored in a database and is used to support the collaborative filter engine. Nothing in Breese discloses, teaches, or suggests that the user interface is used to generate “a user request for a product” or a “user request specifying a **desired** attribute value,” as recited in independent claim 1. Thus, Breese also fails to disclose, teach, or suggest “a user request for a product having a plurality of product attributes, **the user request specifying a desired attribute** value for each of a plurality of selected product attributes,” as recited in independent claim 1, as amended.

Second, the Examiner appears to be equating the similar items list disclosed in Linden with the “attribute similarity value” disclosed in independent claim 1. (Office Action, Page 7). However, the similar items list disclosed in Linden cannot properly be construed as the “attribute similarity value” disclosed in independent claim 1. The similar items list disclosed in Linden is merely a list of items that have been correlated based on previous purchases. The similar items list is described in Linden as being part of the similar items table, which is updated off-line on a periodic basis. (Column 8, line 64 - Column 9, line 40). Nothing in Linden discloses, teaches, or suggests that a list of similar items can be equated with “an attribute similarity value” or any other **value**. Furthermore, even if the similar items list could be construed as **an** attribute similarity value, the similar items list cannot properly be construed as **the** “attribute similarity value,” recited in independent claim 1, because the similar items list is not determined by comparing “the desired attribute value specified in the user request with the attribute value for the potential alternative product,” as recited in independent claim 1. Rather, the similar item list is determined off-line on a periodic basis and, therefore, not in response to a user request. Moreover, the Examiner has equated the drop-down selection of nonfiction or romance in Linden with the “user request specifying a desired attribute value,” as recited in independent claim 1. Even if the drop-down selection could properly be construed as the “user request specifying a desired attribute value,” there is nothing in Linden that

discloses, teaches, or suggests comparing the drop-down selection with the attribute value for a potential alternative product to determine the “list of similar items.” Thus, Linden fails to disclose, teach, or suggest comparing “the desired attribute value specified in the user request with the attribute value for the potential alternative product to **determine an attribute similarity value** for the selected product attribute for the potential alternative product,” as recited in independent claim 1, as amended.

Again, these inadequacies of Linden are not remedied by the proposed combination with Breese. The Examiner appears to equate the similarity value disclosed in Breese with the “attribute similarity value,” recited in independent claim 1. According to Breese, a similarity value is “determined as a sum of products of **all** adjusted attribute values for an entity and the normalized attribute values of the new entity.” (Column 17, lines 50-52). Thus, the similarity value in Breese is determined based on a comparison of **all** of the attribute values for an entity. In contrast, the “attribute similarity value,” recited in claim 1 is determined “for each **selected** product attribute.” To construe the “attribute similarity value,” recited in claim 1 as not containing the limitation requiring that it be determined for “the selected product attribute” would undermine the function of the search procedure and would render meaningless the requirement for a “user request specifying a desired attribute value for each of a plurality of **selected** product attributes,” as recited in independent claim 1. Accordingly, Breese also fails to disclose, teach, or suggest comparing “the desired attribute value specified in the user request with the attribute value for the potential alternative product **to determine an attribute similarity value** for the **selected** product attribute for the potential alternative product,” as recited in independent claim 1, as amended.

Third, the commonality index, calculated from a list of similar items and consisting of measures of the similarity between two items, cannot be properly construed as determining “a product similarity value,” as recited in independent claim 1. First, the Examiner even admits that Linden **does not teach** determining a similarity value from a desired attribute value specified in the user request. (Office Action, Page 9). Second, as shown above, the “list of similar items” cannot properly be construed as an “attribute similarity value,” as recited in independent claim 1. Thus, calculating the “commonality

index” from a “list of similar items” cannot properly be construed as determining “a product similarity value for the potential alternative product **according to the attribute similarity values**” as recited in independent claim 1. Third, the commonality index disclosed in Linden indicates that the relatedness of two items is “based on the sales of the respective items.” (Column 9, Lines 34- 40). Thus, the commonality index at best could only be determined according to the attribute similarity value for a single product attribute (sales history) and could not properly be construed as being determined according “each attribute similarity value” for “**a plurality of selected product attributes**,” as recited in independent claim 1. Thus, Linden fails to disclose, teach, or suggest determining “a product similarity value for the potential alternative product **according to the attribute similarity values**, each attribute similarity value having been determined for a selected product attribute for which a desired attribute value is specified in the user request by comparing the desired attribute value specified in the user request with the attribute value for the potential alternative product” as recited in independent claim 1.

Once more, these inadequacies in Linden are not remedied by the proposed combination with Breese. The Examiner does identify any portion of Breese that can be properly construed as the “product similarity value,” recited in independent claim 1. However, to the extent that the Examiner is equating the “similarity value” in Breese with the “product similarity value,” recited in independent claim 1, Applicants respectfully disagree. First, the similarity value in Breese cannot be construed as the “product similarity value,” because there is nothing in Breese which can properly be construed as an “attribute similarity value,” as recited in independent claim 1. And, absent an “attribute similarity value,” there can be no teaching, suggestion, or disclosure of determining “a product similarity value...according to the attribute similarity values,” as recited in independent claim 1. Second, as noted above, the similarity value in Breese is determined based on a comparison of **all** of the attribute values for an entity, and cannot be properly construed as a “product similarity value” that is “determined according to the attribute similarity values determined for each **selected** product attribute,” as recited in independent claim 1. Thus, Breese also fails to disclose, teach, or suggest determining “a product similarity value for the potential alternative product **according to the attribute similarity values**, each attribute similarity value having been determined **for a selected**

product attribute for which a desired attribute value is specified in the user request by comparing the desired attribute value specified in the user request with the attribute value for the potential alternative product” as recited in independent claim 1.

It is also respectfully pointed out that the Examiner has not properly established the required teaching, suggestion, or motivation to combine Linden and Breese as proposed.

First, Linden is not capable of being combined with Breese in the manner proposed by the Examiner. The Examiner appears to propose applying the similarity value calculations in Breese with the drop-down user selection in Linden. However, such a combination is not proper because the drop-down user selection in Linden is not compatible with the similarity value calculations in Breese. The similarity value calculations in Breese involve mathematical comparisons of entities based upon normalized attribute values. (Column 16, lines 4-23). Even assuming that the drop-down nonfiction or romance selections in Linden could be properly construed as “selected product attributes,” as recited in independent claim 1, there is nothing in Breese or Linden which teaches, suggests, or discloses a way for the mathematical equations in Breese to be applied to the selection of nonfiction or romance to determine a similarity value. Specifically, nothing in Breese or Linden teach, suggest, or disclose a way to convert the selection of nonfiction or romance into a mathematical value that can be normalized and used to calculate a meaningful similarity value. Thus, the proposed Linden-Breese combination is improper.

Second, even if it would have been possible to combine the teachings of Linden and Breese, which Applicants do not admit, the rejection would still be improper because the Examiner has not shown the required teaching, suggestion, or motivation in Linden, in Breese, or in knowledge generally available to those of ordinary skill in the art at the time of the invention to combine Linden with Breese in the manner the Examiner proposes. Independent claims 1, 5, 33, and 48 are also allowable for at least this additional reason.

Nothing in Linden, Breese, or knowledge generally available to those of ordinary skill in the art at the time of the invention teaches, suggests, or motivates in any way the proposed combination. The Examiner’s speculation that “it would have been obvious” to

one of ordinary skill in the art at the time of the invention to combine the teachings of Linden and Breese to achieve Applicants' invention, in hindsight with the benefit of Applicants' claims as a roadmap for selecting portions of multiple references, is clearly insufficient under the MPEP and the governing Federal Circuit case law. Moreover, the Examiner's conclusory statements that the combination "would allow" a user to enter specified attribute [values] and that this "would be an essential element" are directly at odds with the governing MPEP and Federal Circuit guidelines. Similarly, the Examiner's conclusion that "it would be useful to allow a user to enter and search on more than one attribute because this would enable the invention to screen out more items that would not have been screened if only one attribute were used, thereby [achieving certain benefits]," does not overcome the deficiencies of the Examiner's previous statements. The fact remains that the prior art simply fails to provide the requisite teaching, suggestion, or motivation to combine Linden with Breese in the manner the Examiner proposes.

In addition, in stark contrast to the alleged obviousness of the proposed combination is the fact that both Linden and Breese actually teach away from the combination proposed by the Examiner. For example, Breese discloses that requiring a user request, as recited in independent claim 1, is a "drawback to be eliminated" through the use of "collaborative filtering" techniques. (Column 1, line 59 - Column 2, line 3; Column 3, lines 40-46). Similarly, Linden teaches that the recommendations are generated "based exclusively on the purchase history and any item ratings profile of the particular user." (Column 14, lines 25-26). Both the purchase history and the item ratings profiles are stored in a "user profiles" database. (Column 7, lines 20-30). Thus, Linden teaches away from selections based upon an attribute value specified in the user request. Linden also teaches away from the use of attribute-driven searching. In particular, Linden states that an important benefit of the disclosed recommendations service "is that the items need not contain any content that is amenable to feature extraction techniques. . . . For example, the method can be used to generate a similar items table given nothing more than the product IDs of a set of products and user purchase histories with respect to these products." (Column 13, Line 63 — Column 14, Line 3). Linden also teaches away from the methods disclosed in Breese. Breese is directed to an improved collaborative filter. However, Linden teaches away from the use of collaborative filters, and provides at least

four disadvantages of collaborative filtering techniques.¹ Accordingly, Linden teaches away from a combination with any form of collaborative filtering technique, including the collaborative filtering techniques disclosed in Breese.

Furthermore, there can be no motivation to combine Linden with Breese, as suggested by the Examiner, because the combination would render Linden unsatisfactory for its intended purpose. The Examiner proposes combining the collaborative filtering methods of Breese with the book recommendation methods of Linden to provide the system disclosed in the present invention. However, one of the central purposes of the recommendation method in Linden is to provide book recommendations based on information about the user that has previously been stored. One of the “important aspects” of this method is that the user is not required to provide all of the stored information in the request, but rather “correlating item interests are performed off-line, and the results are stored . . . for subsequent look-up.” (Column 3, lines 30-34). Thus, if the selection of book recommendations were based on attributes provided by the user at the time the request was made, it would render the methods disclosed in Linden unsatisfactory for their intended purpose. According to the MPEP “If [the] proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” (MPEP § 2143.01).

For at least these reasons, Applicants respectfully submit that claims 5-7, 22-24, 38-40, and 55-57 are not rendered obvious by the proposed combination of May and Li. The Applicants further submit that claims 5-7, 22-24, 38-40, and 55-57 are in condition for allowance. Therefore, the Applicants respectfully request that the rejection of claims 5-7, 22-24, 38-40, and 55-57 be reconsidered and that claims 5-7, 22-24, 38-40, and 55-57 be allowed.

¹ For example, Linden teaches that “collaborative filtering techniques have several problems. One problem is that the user is commonly faced with the onerous task of having to rate items in the database to build a personal ratings profile. . . . Another problem with collaborative filtering techniques is that an item in the database normally cannot be recommended until the item has been rated. . . . Another problem with collaborative filtering methods is that the task of comparing user profiles tends to be time consuming. . . . Another problem with both collaborative and content based systems is that they generally do not reflect the current preferences of the community of users.” (Column 1, line 58 - Column 2, line 24).

The Legal Standard for Obviousness Rejections Under 35 U.S.C. § 103:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142. Moreover, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); M.P.E.P. § 2143.03.

With respect to alleged obviousness, there must be something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1986). In fact, the absence of a suggestion to combine is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573 (Fed. Cir. 1997). The mere fact that the prior art can be combined or modified does not make the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. The consistent criterion for determining obviousness is whether the prior art would have suggested to one of ordinary skill in the art that the process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art. Both the suggestion and the expectation of success must be founded in the prior art, not in the Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); *In re O'Farrell*, 853 F.2d 894 (Fed. Cir. 1988); M.P.E.P. § 2142.

A recent Federal Circuit case makes it clear that, in an obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35.

CONCLUSION:


In view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and early reconsideration and a Notice of Allowance are earnestly solicited.

A Request for Extension for Response Within the Second Month is being filed concurrently herewith along with a Transmittal letter that includes an authorization to charge the Extension of Time fee of \$450.00 to Deposit Account No. **500777**. If there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed. Any fee required for such Petition for Extension of Time should be charged to Deposit Account No. **500777**.

Please link this application to Customer No. 38441 so that its status may be checked via the PAIR System.

Respectfully submitted,

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